

GET AWAY SPECIAL
(GAS)
KENNEDY SPACE CENTER
(KSC)
USER HANDBOOK

NOVEMBER 1986



GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND



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KENNEDY SPACE CENTER (KSC) USER HANDBOOK
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GET AWAY SPECIAL (GAS)

KENNEDY SPACE CENTER USERS HANDBOOK

**PREPARED BY: GARY G. WALTERS, GSFC GAS FIELD OPERATIONS MANAGER
DEAN ZIMMERMAN, KSC GAS LAUNCH SITE SUPPORT MANAGER**

FOREWORD

THIS HANDBOOK HAS BEEN PREPARED TO PROVIDE INFORMATION THAT WILL HELP YOU BETTER UNDERSTAND WHAT HAPPENS FROM THE VERY START OF YOUR GET AWAY SPECIAL (GAS) PAYLOAD FIELD OPERATIONS THROUGH THE RETURN OF YOUR PAYLOAD AFTER FLIGHT. THIS HANDBOOK ALSO PROVIDES INFORMATION TO YOU ABOUT THE KENNEDY SPACE CENTER (KSC) AND THE LOCAL AREA IN THE HOPE THAT WE CAN HELP MAKE YOUR STAY A MORE PLEASANT ONE.

**THE GAS TEAM
GODDARD SPACE FLIGHT CENTER
SPECIAL PAYLOADS DIVISION**

BEFORE ARRIVAL AT THE KENNEDY SPACE CENTER

THERE ARE SEVERAL THINGS THAT SHOULD TAKE PLACE BEFORE YOUR ARRIVAL AT THE KENNEDY SPACE CENTER (KSC).

PERSONNEL:

IN ORDER TO SPEED UP YOUR ACCESS TO KSC, THE GAS FIELD OPERATIONS TEAM NEEDS THE FOLLOWING INFORMATION AT LEAST TWO (2) WEEKS PRIOR TO YOUR ARRIVAL. THE FIELD OPERATIONS TEAM NEEDS THIS INFORMATION FOR EVERY PERSON IN YOUR GROUP VISITING KSC EXCEPT FOR THOSE WHO ALREADY HAVE A NASA IDENTIFICATION BADGE.

UNITED STATES CITIZENS:

FULL NAME, INCLUDING MIDDLE INITIAL, AS IT APPEARS ON HIS/HER DRIVER'S LICENSE.

SOCIAL SECURITY NUMBER

NAME OF THE COMPANY FOR WHOM HE/SHE WORKS

ADDRESS OF COMPANY

FOREIGN NATIONALS:

FULL NAME, INCLUDING MIDDLE INITIAL, AS IT APPEARS ON HIS/HER PASSPORT/DRIVER'S LICENSE

NAME OF COMPANY FOR WHOM HE/SHE WORKS

ADDRESS OF COMPANY

PASSPORT NUMBER

FULL HOME ADDRESS

DATE AND PLACE OF BIRTH

SHIPPING OF PAYLOAD AND GROUND SUPPORT EQUIPMENT

SHIPMENT OF HARDWARE TO KSC

IF YOU ARE SHIPPING YOUR PAYLOAD AND ASSOCIATED GROUND SUPPORT EQUIPMENT TO KSC YOU SHOULD VERIFY THE APPROPRIATE SHIPPING ADDRESS THROUGH YOUR NASA TECHNICAL MANAGER (NTM).

THE FOLLOWING ADDRESS SHOULD BE USED IF YOUR SHIPMENT ORIGINATES WITHIN THE UNITED STATES:

TRANSPORTATION OFFICER, NASA
BOC WAREHOUSE M6-744
KENNEDY SPACE CENTER, FL 32899

M/F GAS RECEIVING OFFICER, CM-C10-2B, GET AWAY SPECIAL
ATTN.: GAS FIELD OPERATIONS MANAGER

THE FOLLOWING ADDRESS SHOULD BE USED IF THE SHIPMENT ORIGINATES OUTSIDE THE UNITED STATES:

TRANSPORTATION OFFICER, NASA
BOC WAREHOUSE M6-744
KENNEDY SPACE CENTER, FL 32899, USA

M/F GAS RECEIVING OFFICER, CM-C10-2B, GET AWAY SPECIAL
ATTN.: GAS FIELD OPERATIONS MANAGER

C/O PORT DIRECTOR OF CUSTOMS
CAPE CANAVERAL, FL 32920, USA

SHIPPING OF PAYLOAD AND GROUND SUPPORT EQUIPMENT (CONT'D)

U.S. CUSTOMS OFFICIALS ARE AVAILABLE LOCALLY. INSPECTION CAN BE ACCOMPLISHED AT KSC IF PRIOR ARRANGEMENTS ARE MADE. SHIPMENTS ARRIVING ON MONDAY OR FRIDAY WILL NOT BE INSPECTED BY CUSTOMS UNTIL THE NEXT WORKING DAY DUE TO OTHER INSPECTION OBLIGATIONS OF THE CUSTOMS INSPECTION TEAM SCHEDULED ON THOSE DAYS.

IF YOU ARE SHIPPING FROM OUTSIDE THE UNITED STATES, YOU SHOULD INDICATE PLAINLY TO YOUR CARRIER, AND HAVE STENCILED ON YOUR SHIPMENT, THAT IT IS A THROUGH SHIPMENT AND CANNOT BE DELAYED. THIS WILL PRECLUDE YOUR SHIPMENT FROM SITTING IN CHICAGO, NEW YORK, OR WHEREVER IT MUST CHANGE FLIGHTS, FOR 2 OR 3 DAYS (SOMETIMES LONGER) BEFORE IT IS SENT TO THE KENNEDY SPACE CENTER, OR FROM BECOMING LOST AMONG OTHER CARGO AWAITING TRANSIT.

SHIPMENTS INVOLVING CUSTOMS INSPECTIONS CAN HAVE SPECIAL PROBLEMS WHICH CAN BE AVOIDED WITH A LITTLE EFFORT.

WHEN YOU SHIP FROM OUTSIDE THE UNITED STATES, PLACE A COPY OF YOUR SHIPPING DOCUMENT (OR, IF EXTENSIVE, THAT PART WHICH PERTAINS TO THE INDIVIDUAL BOX/CARTON) ON THE TOP OF THE CONTENTS OF EACH BOX/CARTON INSIDE THE CONTAINER, AND FASTEN A COPY TO THE OUTSIDE OF EACH CONTAINER LISTING THE CONTENTS OF THAT CONTAINER. THIS IS IN ADDITION TO THE MASTER COPY OF THE COMPLETE SHIPPING DOCUMENT WHICH IS ATTACHED TO THE FIRST CONTAINER LISTED ON YOUR DOCUMENT. THE SAME PROCEDURE APPLIES AS WELL FOR SHIPPING OUT OF THE UNITED STATES.

SHIPPING OF PAYLOAD AND GROUND SUPPORT EQUIPMENT (CONT'D)

BECAUSE OF THE CONCERN ABOUT TECHNOLOGY TRANSFER THERE MAY BE OCCASIONS WHERE AUDIT TRAILS HAVE BEEN OR WILL BE ESTABLISHED FOR A PIECE OF EQUIPMENT/HARDWARE. IN THESE INSTANCES, THE ITEM IS TRACKED IN AND OUT OF EVERY COUNTRY IT TOUCHES. THERE ARE SPECIAL FORMS FOR THIS, SHOULD IT OCCUR. THEREFORE, IDENTIFICATION OF HARDWARE/GROUND SUPPORT EQUIPMENT BY MODEL NUMBER, PART NUMBER, SERIAL NUMBER, MANUFACTURER, AND COUNTRY OF ORIGIN IS IMPORTANT.

IF YOU HAVE A PIECE OF EQUIPMENT THAT YOU HAVE MADE/FABRICATED IN YOUR LABORATORY OR TECHNICAL SHOP, THAT INFORMATION NEEDS TO BE STATED BEHIND THE ITEM AS IT IS LISTED ON YOUR SHIPPING DOCUMENT; e.g., PYRO SIMULATOR TEST UNIT (LAB-BUILT) OR ELECTRICAL CHECKOUT TEST MONITOR (SHOP-BUILT).

COMPLETE AND ACCURATE RECORDING OF THE SHIPPING DOCUMENT AND THE IDENTITY OF EACH ITEM IS NECESSARY. EVERYTHING IN THE SHIPMENT NEEDS TO BE IDENTIFIED IN SOME CLEAR WAY. THERE ARE MANY SUBSTANCES/MATERIALS/ITEMS THAT SEEM TO CLEAR FOREIGN CUSTOMS OR COUNTRIES THAT WILL NOT CLEAR IN THE UNITED STATES. FOR EXAMPLE, THE SHIPMENT OF AEROSOLS, EPOXIES, SOLVENTS, ADHESIVES, PAINTS, ETC., MAKE THEIR WAY TO THE KENNEDY SPACE CENTER, IMPROPERLY SHIPPED OR NOT IDENTIFIED AT ALL. ALTHOUGH THESE AND ALL HAZARDOUS ITEMS ARE CLEARLY IDENTIFIED IN THE IATA (INTERNATIONAL AIR TRANSPORTATION ASSOCIATION) REGULATIONS, DERIVED FROM THE ICAO (INTERNATIONAL CIVIL AVIATION ORGANIZATION) REGULATIONS*, RECOGNIZED AND USED WORLDWIDE FOR INTERNATIONAL AIR SHIPMENTS. YOU MAY BE ABLE TO SHIP THIS MATERIAL INTO THE KENNEDY SPACE CENTER WITHOUT PROPER IDENTIFICATION OR HAVING IT LISTED ON YOUR SHIPPING DOCUMENT WHICH IS PART OF YOUR CUSTOMS CLEARANCE, BUT YOU WILL NOT BE ABLE TO SHIP IT TO YOUR HOME DESTINATION WITHOUT THE PROPER IDENTIFICATION.

OUTGOING SHIPMENTS (FLIGHT EXPERIMENTS) HAVE BEEN HELD UP AS LONG AS 3-4 WEEKS AFTER FLIGHT BECAUSE OF THIS PROBLEM. THE WISE THING IS TO BE VERY CONSCIENTIOUS IN THIS AREA WHEN YOU SHIP TO US. THEN, WHEN YOU ARE READY TO SHIP OUT AFTER YOU FLY, THE PROBLEM IS NOT THERE. MOST SUBSTANCES CAN BE SHIPPED (THERE ARE SOME EXCEPTIONS LISTED IN THE IATA) BUT EACH HAS ITS OWN SET OF SPECIAL PACKAGING/SHIPPING INSTRUCTIONS AND ONCE COMPLIED WITH, CAN USUALLY ACCOMPANY THE MAIN BODY OF THE SHIPMENT WITHOUT FURTHER PROBLEMS. A LITTLE EXTRA CARE AND CONCERN IN THE BEGINNING WILL ELIMINATE WHAT CAN BECOME A VERY LARGE HEADACHE AT THE END OF THE FLIGHT.

*AS OF 1 JANUARY 1987, ALL SHIPMENTS WILL BE REQUIRED TO SATISFY THE REQUIREMENTS OF THE ICAO, WHICH IS MORE STRINGENT THAN THE IATA IN THE AREA OF RESTRICTED ITEMS. MORE INFORMATION WILL BE FORTHCOMING WHEN IT IS DETERMINED HOW NASA WILL BE OPERATING UNDER THIS REGULATION.

SHIPPING OF PAYLOAD AND GROUND SUPPORT EQUIPMENT (CONT'D)

IN THE AREA OF DOMESTIC SHIPMENTS, THE SAME GENERAL INSTRUCTIONS APPLY CONCERNING COMPLETE IDENTIFICATION OF ALL ITEMS AND ALL MATERIALS—HAZARDOUS AND NONHAZARDOUS. THE RULES OF 49 CFR (CODE OF FEDERAL REGULATIONS) COVERING AIR AND SURFACE SHIPPING IN THE UNITED STATES MUST BE COMPLIED WITH.

ALL HAZARDOUS, TOXIC OR CONTROLLED MATERIALS MUST BE IDENTIFIED ON THE SHIPPING DOCUMENTATION AND SOME MAY HAVE TO BE SHIPPED SEPARATELY.

BATTERIES ARE A SPECIAL PROBLEM, ESPECIALLY WHEN WET AND CHARGED. THE SHIPPING DOCUMENT MUST IDENTIFY THE TYPE OF ELECTROLYTE, QUANTITY OF ELECTROLYTE PER CELL AND NUMBER OF CELLS. THE UNITED NATIONS (UN) CLASSIFICATION SHOULD BE INCLUDED, IF KNOWN.

RADIATION SOURCES MUST BE IDENTIFIED AS SUCH AND MUST BE SHIPPED SEPARATELY UNLESS PRIOR ARRANGEMENTS ARE MADE THROUGH THE NASA KSC GAS SHIPPING AND RECEIVING OFFICER. IN ADDITION TO INFORMATION ON THE ISOTOPE FORM/QUANTITY, PACKAGE MARKING AND SPECIAL HANDLING INSTRUCTIONS, THE APPROPRIATE RADIOACTIVE MATERIAL LICENSE TRANSFER DOCUMENTATION MUST BE INCLUDED WITH YOUR SHIPMENT.

ORDNANCE: EVENTHough YOU AS A GAS CUSTOMER MAY NOT USE ORDNANCE IN YOUR PAYLOAD, YOU SHOULD REALIZE THAT EVEN PROMOTIONAL MATCH BOOKS ARE CONSIDERED CLASS "C" ORDNANCE. ALL ORDNANCE MUST BE SHIPPED SEPARATELY UNLESS PRIOR APPROVALS ARE OBTAINED AND MUST BE SHIPPED IN ACCORDANCE WITH THE PROVISIONS OF IATA AND 49 CFR. CONTACT THE KSC GAS LOGISTICS OFFICER IF THERE ARE ANY QUESTIONS ABOUT WHAT ORDNANCE IS OR HOW TO SHIP IT.

SHIPPING OF PAYLOAD AND GROUND SUPPORT EQUIPMENT (CONT'D)

IT WOULD ALSO BE WELL TO ASSURE THAT YOUR SHIPMENT IS STENCILLED, THAT IT IS A THROUGH SHIPMENT AND THAT YOUR CARRIER IS PARTICULARLY ADVISED OF THIS, SINCE DOMESTIC SHIPMENTS FREQUENTLY CHANGE FLIGHTS OR TRUCKS IN TRANSIT AND CAN SIT FOR DAYS IN LESS THAN OPTIMUM CONDITIONS FOR YOUR PAYLOAD.

ANY TIME HARDWARE IS SHIPPED VIA A COMMERCIAL CARRIER TO KSC, THE GAS SHIPPING AND RECEIVING OFFICER SHOULD BE NOTIFIED AS SOON AS THE HARDWARE IS SHIPPED, OR AS SOON AS THE SHIPPING INFORMATION IS AVAILABLE; THE TELEPHONE NUMBER IS 305-853-7591. THIS CAN PRECLUDE DELAYS IN HANDLING SHIPMENTS ONCE YOU ARRIVE AT KSC. SHIPPING INFORMATION NEEDED INCLUDES: NAME OF CARRIER, FLIGHT NUMBERS, AIRBILL NUMBER OR PACKING AND RECEIVING ORDER (PRO) NUMBER (IF BY TRUCK, NUMBER OF PIECES, APPROXIMATE SIZE AND WEIGHT, ANY OTHER INFORMATION YOU THINK MIGHT BE USEFUL IN TRACKING/LOCATING/EXPEDITING A SHIPMENT, SUCH AS CITY NAMES, WHERE FLIGHTS CHANGE, ETC.

IF YOU DESIRE, YOU CAN BRING YOUR HARDWARE TO THE GAS FACILITY AT KSC IN YOUR OWN VEHICLE. YOU MAY BRING YOUR PAYLOAD BY PRIVATE PLANE INTO TICO AIRPORT LOCATED ON HIGHWAY 1 BETWEEN TITUSVILLE AND COCOA FLORIDA. TRANSPORTATION TO THE GAS FACILITY CAN BE ARRANGED THROUGH THE GAS SHIPPING AND RECEIVING OFFICER OR THE LAUNCH SITE SUPPORT MANAGER. PRIVATE PLANES CANNOT LAND AT THE SHUTTLE LANDING FACILITY ON KSC OR THE "SKID STRIP" ON CCAFS.

SHIPPING OF PAYLOAD AND GROUND SUPPORT EQUIPMENT (CONT'D)

SHIPMENT OF HARDWARE FROM KSC

AN ITEMIZED LIST OF ALL HARDWARE (INCLUDING PART NAME, PART NUMBER, MODEL NUMBER AND VALUE) MUST BE PREPARED BY THE OWNER PRIOR TO TURNOVER OF THE HARDWARE TO THE GAS SHIPPING AND RECEIVING OFFICER FOR SHIPMENT. NON-HARDWARE ITEMS MUST ALSO BE LISTED AND PROPERLY IDENTIFIED. WHEN ANY ITEM IS IMPROPERLY IDENTIFIED OR NOT LISTED AT ALL, DELAY IN THE SHIPMENT RESULTS AND UNNECESSARY TRIPS TO KSC TRANSPORTATION ARE REQUIRED TO CHANGE AND INITIAL SHIPPING DOCUMENTS. FORMS ARE AVAILABLE FROM THE GAS FIELD OPERATIONS MANAGER AT GSFC 301-286-8530, AT KSC 305-853-6896 OR THE KSC/GAS LAUNCH SITE SUPPORT MANAGER, AT KSC 305-867-3183), THE GAS SHIPPING AND RECEIVING OFFICER IS AVAILABLE AT 305-853-7591 TO ANSWER YOUR CONCERN'S ABOUT ANY PART OF YOUR PACKING AND SHIPMENT.

AFTER SUBMITTING YOUR ITEMIZED LIST, SOMEONE ON YOUR TEAM MUST REMAIN TO BE AVAILABLE TO ANSWER ANY QUESTIONS THE GAS SHIPPING AND RECEIVING OFFICER MAY HAVE AFTER REVIEW OF YOUR INVENTORY AND POSSIBLE INSPECTION OF THE SHIPMENT TO ASSURE THAT THERE WILL BE NO PROBLEMS IN GETTING YOUR SHIPMENT OUT THROUGH THE KSC TRANSPORTATION OFFICER. IF YOU LEAVE BEFORE THIS ASSURANCE IS MET AND PROBLEMS ARISE FROM THE SHIPMENT THAT ONLY YOU CAN ANSWER, THE SHIPMENT WILL BE DELAYED BY THE NUMBER OF DAYS IT TAKES TO CONTACT THE RESPONSIBLE MEMBER OF YOUR GROUP TO GET THE ANSWER.

UNLESS SPECIFICALLY APPROVED BY KSC IN ADVANCE, ALL OUTGOING CARTONS WILL BE OPENED AND THE CONTENTS CHECKED AGAINST THE SHIPPING DOCUMENT PRIOR TO SHIPMENT. THE GAS SHIPPING AND RECEIVING OFFICER MUST INSPECT THE CONTENTS OF THE SHIPMENT DURING PACKING IF YOU DO NOT WISH FOR YOUR SHIPMENT TO BE OPENED AFTER IT LEAVES THE GAS FACILITY. IN THIS WAY, IT MAY BE CERTIFIED ON THE SHIPPING DOCUMENT THAT THE CONTENTS ARE AS LISTED.

ALL HAZARDOUS TOXIC AND CONTROLLED MATERIALS MUST BE IDENTIFIED ON THE SHIPPING DOCUMENT AND SOME MAY HAVE TO BE SHIPPED SEPARATELY. IF POSSIBLE, A TECHNICAL DATA SHEET IS TO BE PROVIDED TO HELP AVOID DELAYS IN CASES WHERE SUBSTANCE/ITEM IS IN QUESTION CONCERNING THE NATURE AND DEGREE OF HAZARD. IF A UN CLASSIFICATION NUMBER IS ASSIGNED TO THE ITEM/PRODUCT, THIS INFORMATION IS TO BE INCLUDED. OTHERWISE, MANY TELEPHONE COORDINATIONS ARE REQUIRED WITH THE MANUFACTURERS (IF KNOWN), AND IF UNABLE TO IDENTIFY FROM YOUR INFORMATION, THE MATERIAL MUST BE PULLED FROM THE SHIPMENT. THE REQUIREMENTS OF THE IATA AND 49 CFR, CITED EARLIER IN THIS DOCUMENT, MUST BE COMPLIED WITH.

PERSONAL OR HOUSEHOLD TYPE GOODS CAN BE SHIPPED BUT THEY MUST BE SHIPPED SEPARATELY AND UNDER SEPARATE SHIPPING DOCUMENTS, AND MUST SATISFY RESTRICTED ITEM AND CUSTOMS REQUIREMENTS.

SHIPPING OF PAYLOAD AND GROUND SUPPORT EQUIPMENT (CONT'D)

HAZARDOUS ITEMS SUCH AS BATTERIES, RADIOACTIVE MATERIAL AND ORDNANCE HAVE THE SAME REGULATIONS/REQUIREMENTS WHICH WERE APPLIED TO INCOMING SHIPMENTS ALSO APPLY TO OUT-GOING SHIPMENTS.

IF THE HARDWARE IS HAND CARRIED OFF KSC OR CAPE CANAVERAL AIR STATION (CCAFS) IN A PRIVATELY OWNED VEHICLE, YOU MUST HAVE A HAND RECEIPT SIGNED BY THE KSC/GAS LAUNCH SITE SUPPORT MANAGER OR A REGULAR SHIPPING DOCUMENT SHOULD BE PREPARED AND SIGNED BY THE GAS SHIPPING AND RECEIVING OFFICER. THIS WILL PRECLUDE DELAYS IF YOU ARE STOPPED AND SEARCHED BY SECURITY PERSONNEL ON YOUR WAY OFF THE CENTER.

IF THE HARDWARE IS BEING TAKEN BY A PRIVATELY OWNED VEHICLE FROM KSC OR CCAFS TO AN AIRPORT FOR SHIPMENT AND THE ITEM CANNOT BE X-RAYED OR OPENED FOR INSPECTION, A LETTER MUST BE PREPARED AND SIGNED BY THE GAS SHIPPING AND RECEIVING OFFICER VERIFYING THE CONTENTS. IN THIS CASE, THE SHIPPING AND RECEIVING OFFICER MUST BE PRESENT WHEN THE ITEM OR ITEMS ARE BEING PACKAGED. KSC CAN SHIP VIA ANY COMMERCIAL CARRIER. ALL SHIPMENTS FROM KSC WILL BE C.O.D. THEREFORE, PROPER BILLING INFORMATION MUST BE PROVIDED.

TRAVEL

THERE ARE TWO (2) AIRPORTS YOU CAN FLY INTO THAT HAVE EASY ACCESS TO KSC. YOU CAN USE EITHER MELBOURNE AIRPORT OR THE ORLANDO AIRPORT. IN MOST CASES, THE ORLANDO AIRPORT IS EASIEST BECAUSE OF THE LARGER NUMBER OF FLIGHTS AVAILABLE AS WELL AS THE FLORIDA BEE-LINE EXPRESSWAY DIRECTLY FROM THE AIRPORT TO THE KSC AREA.

MOTELS ARE PLENTIFUL IN THE KSC AREA – EXCEPT DURING SHUTTLE LAUNCH TIMES. WE RECOMMEND YOU MAKE YOUR RESERVATIONS AS EARLY AS POSSIBLE. THE MAP ON PAGE 23 SHOWS THE ROADS IN THE VICINITY OF KSC.

ARRIVAL AT KENNEDY SPACE CENTER

A MAP OF KSC IS SHOWN ON PAGE 24.

YOU MAY ENTER KSC AT EITHER GATE #1 OR #3. GATE #1 IS LOCATED AT PORT CANAVERAL, NORTH OF THE CITY OF CAPE CANAVERAL. GATE #3 IS LOCATED BETWEEN TITUSVILLE AND COCOA. WE SUGGEST YOU USE GATE #1 SINCE IT IS NEAREST THE GAS FACILITY. ALSO, WE FIND THAT IT IS BETTER STAFFED AND HAS BETTER HOURS. GATE #1 IS THE MOST SOUTHERN ENTRANCE AND IS ON THE AIR FORCE SIDE OF THE CENTER (PORT CANAVERAL). STOP AT THE PASS AND ID BUILDING THAT IS 200 YARDS BEFORE YOU GET TO GATE #1 TO PICK UP YOUR BADGES FOR ACCESS TO KSC. STOP AND SHOW YOUR ACCESS BADGES TO THE GUARDS AS YOU PROCEED THROUGH GATE #1. FROM THE GATE TO YOUR FIRST TURN WILL BE $3\frac{1}{2}$ MILES, MAKE A RIGHT TURN ONTO FLIGHT CONTROL ROAD, PROCEEDED ONE MILE TO THE GAS PROCESSING FACILITY ON YOUR LEFT. A ROAD SIGN WILL IDENTIFY THE FACILITY. DRIVE INTO THE PARKING LOT INSIDE THE GATE. A DIAGRAM OF THE GAS PROCESSING FACILITY ON PAGE 19 SHOWS (AMONG OTHER THINGS) THE MAIN ENTRANCE TO THE BUILDING.

WHAT TO EXPECT

AFTER YOU HAVE ENTERED THE GAS PROCESSING FACILITY AND MEET THE GAS INTEGRATION TEAM, WE WILL HAVE A BRIEF MEETING TO GIVE YOU INSTRUCTIONS FOR MOVING YOUR PAYLOAD AND GSE INTO THE BUILDING AND ASSIGN YOU TO AN AREA IN WHICH TO WORK. FROM THIS POINT, YOU HAVE THREE (3) DAYS TO WORK AND MAKE YOUR PAYLOAD READY FOR HAND-OFF TO THE GAS TEAM FOR INSTALLATION INTO THE GAS FLIGHT CANISTER. INCLUDED IN YOUR PREPARATION IS AN INSPECTION BY YOUR NASA TECHNICAL MANAGER (NTM), WHICH MAY INCLUDE X-RAYING OF SPECIFIC COMPONENTS. ONCE THE HAND-OFF HAS BEEN MADE, IT TAKES THE GAS TEAM TWO (2) DAYS TO MAKE THE PAYLOAD READY FOR ORBITER INSTALLATION.

PREPARATION ACTIVITIES WILL BE DISCUSSED IN MORE DETAIL LATER IN THIS HANDBOOK.

THE REMOVAL OF THE GAS CANISTERS FROM THE ORBITER AFTER FLIGHT WILL BE A REVERSAL OF THE INSTALLATION PROCESS. YOU WILL BE TOLD BY YOUR NTM WHEN YOU SHOULD RETURN TO KSC FOR RETURN OF YOUR PAYLOAD. NORMALLY THE PAYLOADS ARE RETURNED TO YOU THREE (3) OR FOUR (4) DAYS AFTER THE ORBITER LANDS AT KSC, REGARDLESS OF WHETHER IT LANDS AT KSC FROM ORBIT OR ON THE BACK OF THE SHUTTLE CARRIER AIRCRAFT (BOEING 747).

FACILITIES

A BRIEF LOOK AT OUR FACILITY TELLS US THAT, WHILE ADEQUATE, OUR SPACE AND EQUIPMENT ARE LIMITED, SEE PAGES 19 AND 20.

WE HAVE A MONORAIL HOIST IN THE FACILITY WHICH IS USED FOR ALL LIFTS. WE ALSO HAVE TWO (2) FORKLIFTS. THESE ARE USED TO TRANSFER EQUIPMENT FROM STORAGE SPACE TO THE MONORAIL HOIST. WE HAVE PLENTY OF TABLES AND BENCHES ON WHICH TO WORK. WE HAVE DESKS FOR USE OF PAYLOAD PERSONNEL, DEPENDING ON HOW MANY PEOPLE ARE USING THE FACILITY AT THE SAME TIME.

TELEPHONE LINES INTO THE FACILITY ARE QUITE LIMITED. WHILE WE HAVE SIX (6) PHONES, THREE (3) IN THE FACILITY AND THREE (3) IN THE OFFICE TRAILER, LOCATED JUST OUTSIDE OF THE MAIN BUILDING, WE HAVE ONLY THREE (3) TELEPHONE NUMBERS, ONE OF WHICH IS LIMITED TO ON-CENTER CALLS ONLY. THE TELEPHONE NUMBERS ARE (305)853-6896/7/8.

ELECTRICAL POWER IS STANDARD THREE (3) PRONG (TWO WIRE AND GROUND) POWER SOURCE. VOLTAGE, 115 VAC, 60 Hz AT 20 AMPS MAXIMUM CURRENT.

TEMPERATURE AND HUMIDITY ARE CONTROLLED IN THE FACILITY TO ABOUT 70 DEGREES F AND 50 PERCENT OR LESS RELATIVE HUMIDITY. THE SYSTEM IS CHECKED DAILY BY THE MAINTENANCE DEPARTMENT. WE LEAVE THE FACILITY EN ROUTE TO THE ORBITER PROCESSING FACILITY (OPF) IN A CLOSED VAN. THIS IS ABOUT A 1 HOUR TRIP. THE TRIP TO THE OPF IS NOT A CONTROLLED TEMPERATURE AND HUMIDITY RIDE. ONCE WE REACH THE OPF WE ARE BACK IN A CONTROLLED TEMPERATURE WITH 50% OR LESS RELATIVE HUMIDITY THROUGH LAUNCH, EXCEPT DURING OPERATIONS IN THE VEHICLE ASSEMBLY BUILDING (VAB) WHILE THE ORBITER IS BEING MATED TO THE EXTERNAL TANK. DURING THE OPERATION THERE IS NO ENVIRONMENTAL CONTROL. HOWEVER, SINCE YOU ARE INSIDE THE PAYLOAD BAY THE TEMEPRATURE NEVER GOES ABOVE 85 DEGREES F AND THE RELATIVE HUMIDITY STAYS BELOW 50%.

VIEWING OF THE LAUNCH

LAUNCH PASSES ARE HANDLED THROUGH NASA HEADQUARTERS, NOT KSC. THREE TYPES OF PASSES ARE AVAILABLE:

1. VIP PASSES – THESE PEOPLE VIEW THE LAUNCH FROM THE VIP STANDS LOCATED NEAR THE PRESS SITE ABOUT THREE (3) MILES FROM THE LAUNCH PADS.
2. VIP CAR PASS – THE VIEWING AREA IS LOCATED ON STATIC TEST ROAD ABOUT SIX (6) MILES FROM THE LAUNCH PADS.
3. REGULAR CAR PASS – THESE CARS ARE PARKED ALONG THE NASA CAUSEWAY OVER THE BANANA RIVER ABOUT SEVEN (7) MILES SOUTH OF THE LAUNCH PADS.

GAS CUSTOMERS SHOULD CONTACT THE CUSTOMER SERVICES DIVISION AT NASA HEADQUARTERS TO MAKE ARRANGEMENTS FOR PASSES TO VIEW THE LAUNCH. PLEASE CALL (202)453-2570 AT LEAST FOUR (4) WEEKS PRIOR TO VISITING KSC.

PRESS BRIEFINGS

STS PAYLOAD CUSTOMERS ARE GIVEN A CHANCE TO BRIEF THE PRESS ON THE DAY BEFORE LAUNCH. ARRANGEMENTS FOR GAS PRESENTERS TO HAVE ACCESS TO KSC AND TO THE PRESS SITE FOR PRESS BRIEFINGS SHOULD BE HANDLED THROUGH THE GODDARD SPACE FLIGHT CENTER PUBLIC AFFAIRS OFFICE. NOTE: DEPENDENTS OF GAS CUSTOMERS ARE NOT ALLOWED INTO THE PRESS SITE, NOR ARE THEY ALLOWED ON THE KENNEDY SPACE CENTER EXCEPT ON THE DAY OF THE LAUNCH WITH THE PROPER GUEST VIEWING PASS.

GAS FIELD OPERATIONS PROCESS

THE CONCEPT OF FIELD OPERATIONS IS BASED UPON YOU BRINGING A PAYLOAD TO THE FIELD READY FOR FLIGHT. PLAN TO DO AS LITTLE AS POSSIBLE BECAUSE OF THE LIMITED TIME AND CAPABILITIES IN THE FIELD. YOU SHOULD BRING EVERYTHING WITH YOU IN THE WAY OF GROUND SUPPORT EQUIPMENT AND TOOLS YOU NEED TO GET THE JOB DONE. UNDER NORMAL CONDITIONS YOU HAVE UP TO THREE (3) DAYS TO GET YOUR PAYLOAD READY FOR HAND-OFF TO THE GAS TEAM FOR INSTALLATION INTO THE GAS CANISTER. PART OF YOUR PAYLOAD PREPARATION WILL BE A SAFETY INSPECTION OF YOUR PAYLOAD BY YOUR NTM. THIS INSPECTION IS FOR US TO SEE THAT YOUR PAYLOAD IS THE SAME AS YOU DESCRIBED IN YOUR SAFETY DATA PACKAGE. ALSO, AT AN APPROPRIATE TIME DURING THE PROCESSING, THE PAYLOAD WILL BE TRANSFERRED FROM THE SHIPPING PLATE TO THE FLIGHT INSTRUMENT MOUNTING PLATE (IMP) OR MOTORIZED DOOR ASSEMBLY IMP. IF PART OF YOUR PAYLOAD CANNOT BE VISUALLY INSPECTED WE HAVE THE ABILITY TO X-RAY YOUR PAYLOAD. THIS WILL HELP US TO DO A MORE THOROUGH JOB AND ALLOWS INSPECTION OF SMALL, SEALED ASSEMBLIES. NO X-RAYING WILL BE PERFORMED ON YOUR PAYLOAD WITHOUT YOUR APPROVAL.

ONCE THE HAND-OFF HAS BEEN MADE, THE GAS TEAM STARTS THE CANISTER INSTALLATION AND FINAL BUTTON-UP. WE WANT YOU TO WORK WITH US IN THE HANDLING OF YOUR PAYLOAD AND ELECTRICAL CHECKS. THE PRIMARY TASKS WE WILL PERFORM DURING THIS PHASE OF THE PROCESS ARE AS FOLLOWS:

1. INSTALL IN-FLIGHT CANISTER
2. SECURE TOP PLATE TO CANISTER
3. PERFORM ELECTRICAL INTERFACE CHECKS
4. SECURE BOTTOM PLATE
5. FINAL ELECTRICAL CHECK
6. PURGE AND PRESSURE CHECK
7. AFTER PRESSURE CHECK IS MADE AND EVERYONE IS SATISFIED, YOU, AS EXPERIMENTERS, ARE FREE TO LEAVE
8. FINAL SAFETY WIRING IS COMPLETED AND THE THERMAL END CAPS ARE INSTALLED

THE ABOVE PROCESS WILL TAKE ABOUT TWO (2) DAYS

GAS FIELD OPERATIONS PROCESS (CONT'D)

9. THE ENTIRE CONTAINER IS WRAPPED IN PLASTIC TO PROTECT IT FROM THE ELEMENTS DURING TRANSPORTATION. IF YOU ARE TO FLY ON THE GAS BRIDGE ASSEMBLY YOUR PAYLOAD WILL BE TRANS- PORTED TO THE GAS BRIDGE ASSEMBLY AREA, INTEGRATED ONTO THE GAS BRIDGE ASSEMBLY AND THEN TAKEN TO THE ORBITER. IF YOU FLY ON THE GAS ADAPTER BEAM ASSEMBLY YOUR PAYLOAD WILL BE TAKEN DIRECTLY TO THE ORBITER PROCESSING FACILITY (SEE PAGES 22 AND 23).

ALL PAYLOADS ON A GIVEN MISSION ARE ACCUMULATED IN THE GAS FACILITY AND ARE TAKEN TO THE GAS BRIDGE ASSEMBLY AREA OR TO THE ORBITER AS A GROUP.

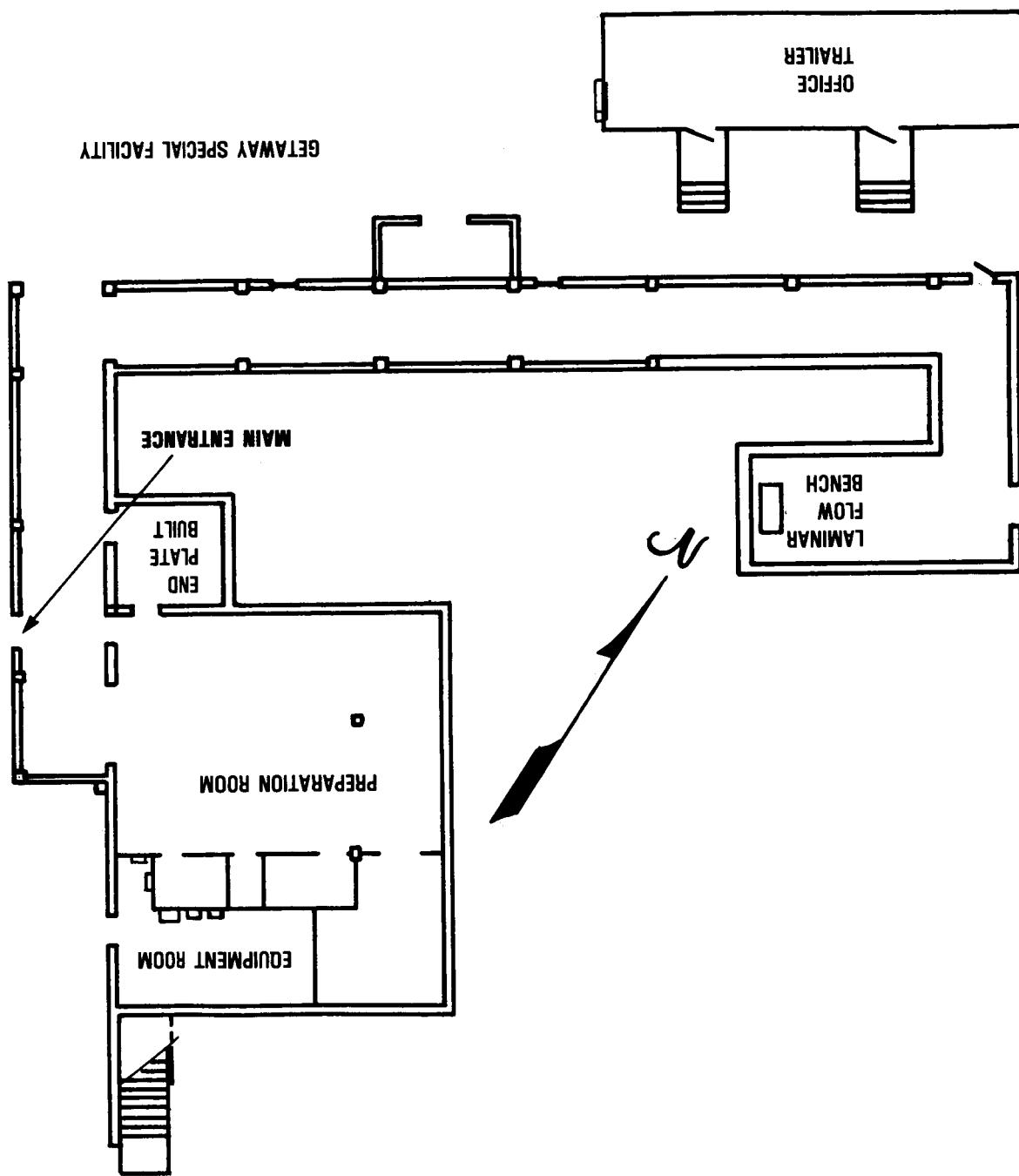
PUBLIC TOURS

PLEASE DO NOT EXPECT TO SEE THE ORBITER OR GO INTO THE SHUTTLE PROCESSING FACILITY. THESE AREAS ARE HIGHLY RESTRICTED. YOUR WORK WILL TAKE PLACE AT THE GAS FACILITY AND THAT IS WHAT YOUR BADGE WILL INDICATE. HOWEVER, ONCE YOUR PAYLOAD IS INSTALLED IN THE GAS CARRIER AND THE PRESSURE CHECKED, WE RECOMMEND THAT YOU VISIT THE KSC VISITOR'S CENTER AND TAKE THE PUBLIC TOUR OFFERED THERE. ONE OF THE INTERESTING STOPS ON THE TOUR IS NEAR THE SHUTTLE LAUNCH PAD.

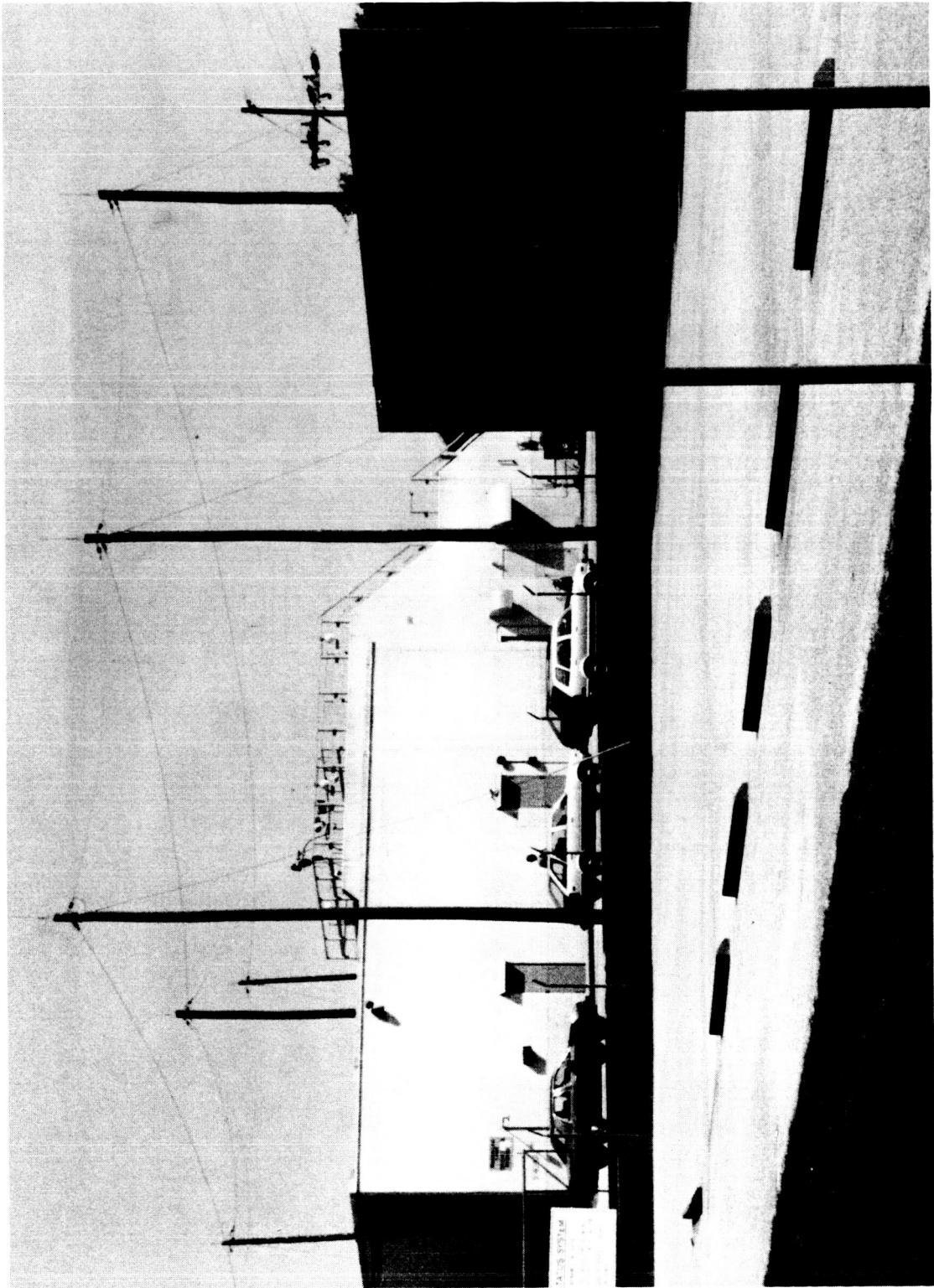
DO'S AND DON'TS

- OBEY THE SPEED LIMITS: THEY ARE STRICTLY ENFORCED. THE SPEED LIMIT IS 35 MILES PER HOUR AT NIGHT ON THE CCAFS.
- DRIVE WITH EXTRA CAUTION IN THE EVENING. THE AREA IS HEAVILY POPULATED WITH WILDLIFE SUCH AS WILD PIGS, DEER, BOBCATS, ALLIGATORS AND MANY POISONOUS SNAKES.
- DON'T EXPLORE OFF THE MAIN ROADS.
- DON'T TAKE PHOTOGRAPHS ANYWHERE ON THE BASE UNLESS GIVEN PERMISSION AS PART OF THE PUBLIC TOURS. IN PARTICULAR, DON'T BRING CAMERAS WITH YOU TO THE GAS FACILITY.
- BRING ONLY THOSE PEOPLE WITH YOU TO THE GAS FACILITY WHO ARE NECESSARY FOR FINAL PREPARATION OF YOUR PAYLOAD.
- DON'T BRING ANYONE UNDER THE AGE OF SIXTEEN (16) TO THE GAS FACILITY UNLESS PRIOR ARRANGEMENTS HAVE BEEN MADE WITH THE FIELD OPERATIONS MANAGER.

GET AWAY SPECIAL (GAS) FACILITY



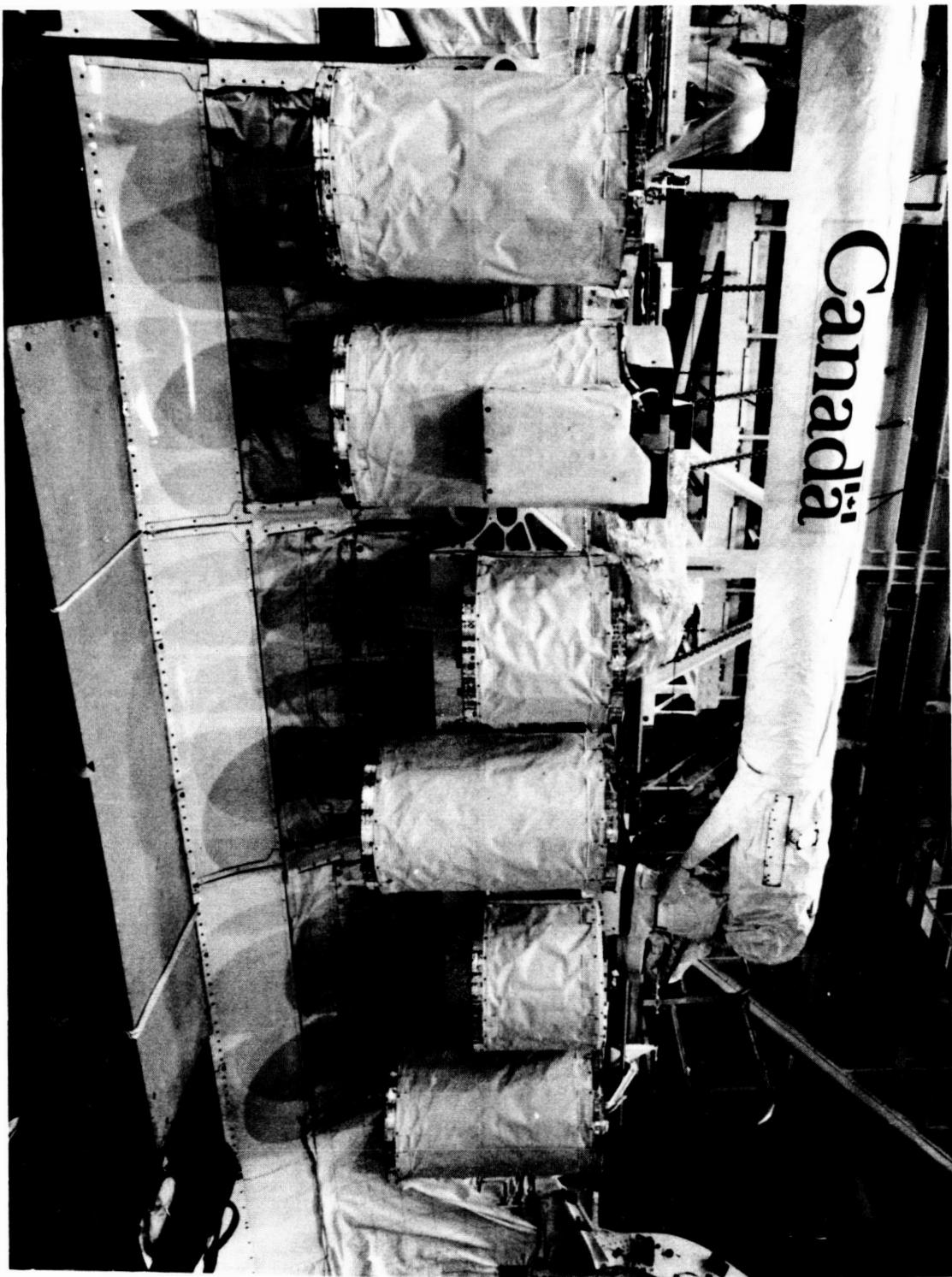
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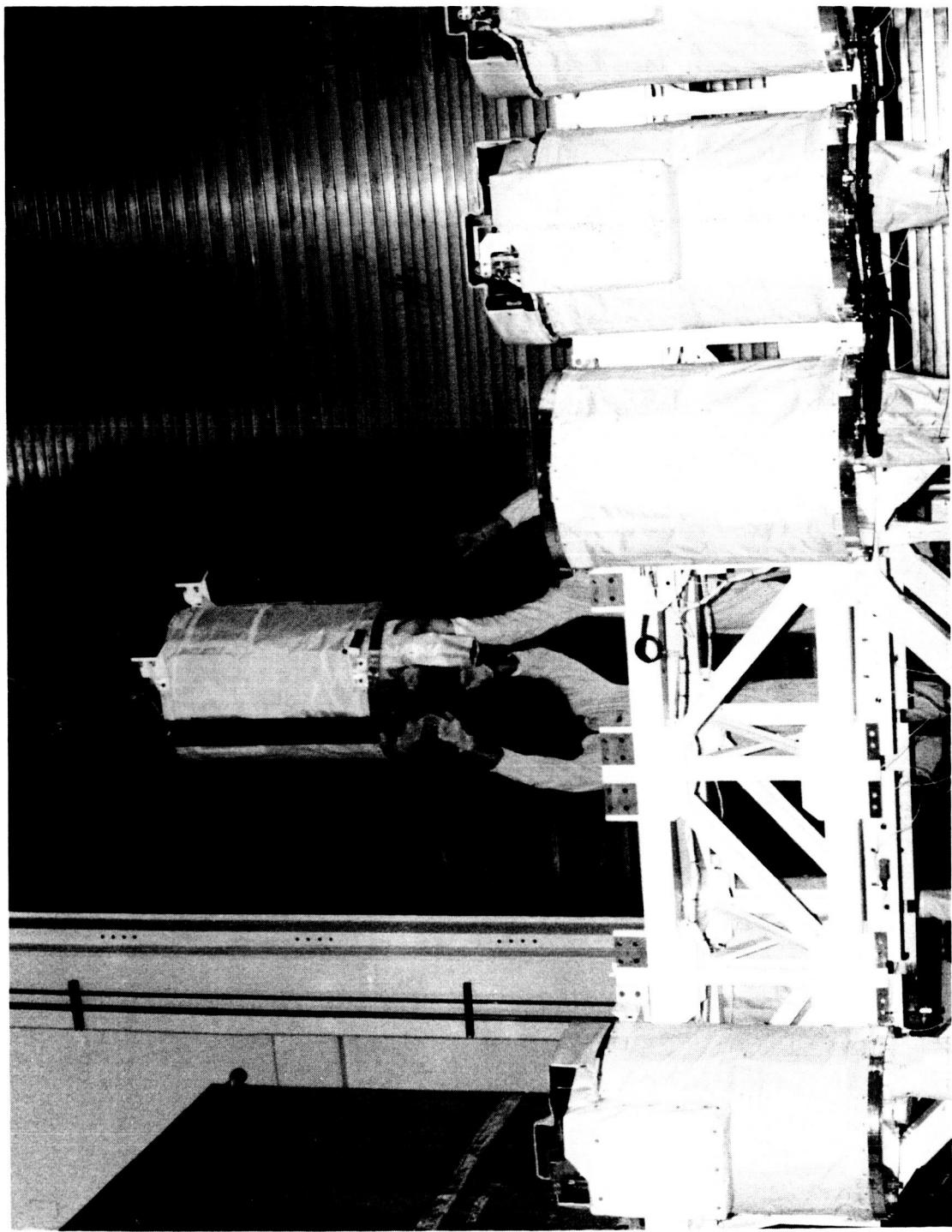
GET AWAY SPECIAL (GAS) FACILITY

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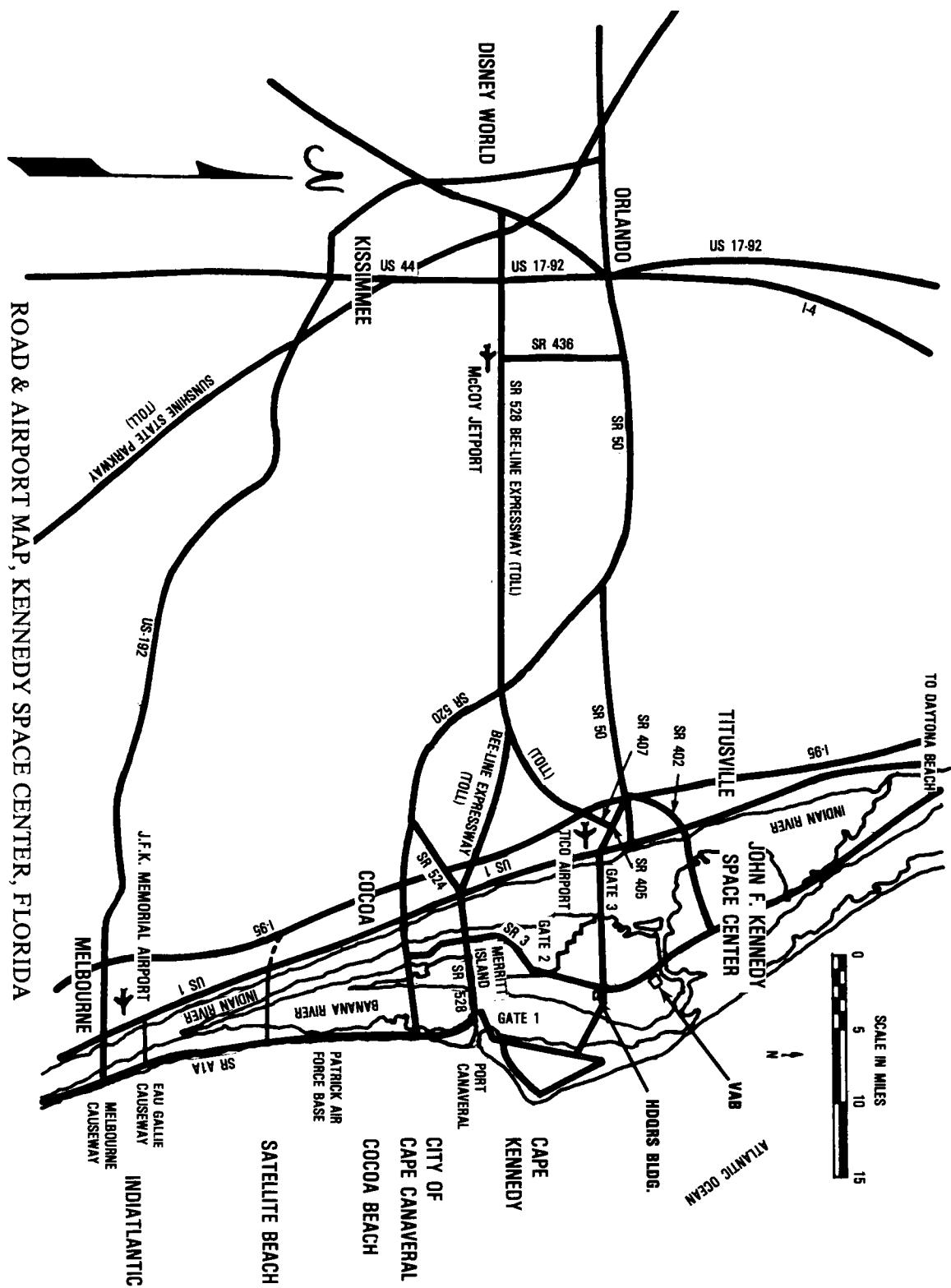
GAS PAYLOADS MOUNTED ON ADAPTER BEAMS IN THE ORBITER

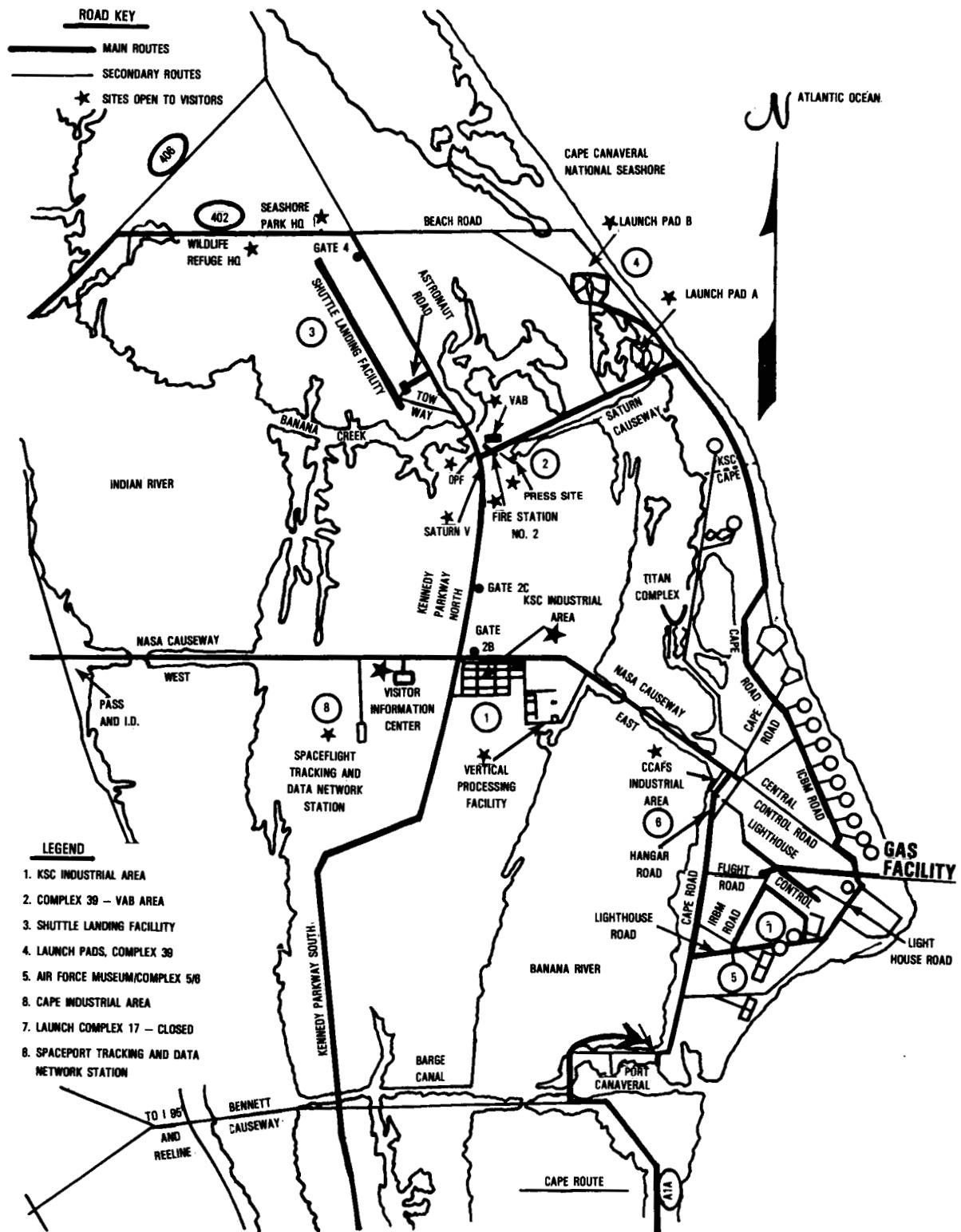


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GAS BRIDGE ASSEMBLY (GBA) INTEGRATION OF GAS PAYLOADS





KSC ROAD MAP